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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,184	12/11/2001	Marcel Breeuwer	NL 000693	2705
24737	7590	11/30/2004	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			LU, TOM Y	
			ART UNIT	PAPER NUMBER
			2621	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/014,184

Applicant(s)

BREEUWER, MARCEL

Examiner

Tom Y Lu

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 5-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 4/1, 4/2, 4/3 and 8-9 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 5-7 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 5-7 have not been further treated on the merits.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “an organ”, “myocardium”, “perfusion measurement”, “a series of images”, “display device”, “transformation operation”, “fixed position”, “a data processing system” and “a computer program” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3, 4/1, 4/2, 4/3 and 8 are rejected under 35 U.S.C. 112 2<sup>nd</sup> paragraph.
  - a. Regarding claim 1, the phrase "notably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
  - b. Claims 2-3, 4/1, 4/2 and 4/3 are rejected as being dependent upon Claim 1.
  - c. Claim 8 is rejected for the same reason given in Claim 1.
  - d. Claims 4/1, 4/2 and 4/3 recite the limitation "the image" in line 3. There is insufficient antecedent basis for this limitation in the claim. The applicant is advised to provide the explanation with regard to the correspondence of "the image" in the preceding claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 4/1, 4/2, 4/3, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Cesmeli et al ("An automated temporal alignment technique for the translational and

rotational correction of digital radiographic images of Bjork-shiley heart valves” Proceedings Of The Computers In cardiology Conference. London, Sept 5-8, 1993, Los Alnmitos, IEEE Comp. SOC. Press, US, 5/9/93/ pages 619-622).

- a. Referring to Claim 1, Cesmeli discloses a method of visualizing the perfusion of an organ, notably the myocardium of a patient, while utilizing a perfusion measurement (Cesmeli teaches a system of visualizing the perfusion of a heart valve, page 619, section 2.1 data acquisition, and the image frames are taken at a speed of 15 or 30 frames per second, which means they are taken while utilizing a perfusion measurement. Note a system is implemented based on a method/theory), in which method a series of images of the organ that has been acquired by way of the perfusion measurement is displayed on a display device so as to be visually inspected (a sequence of image frames are acquired and displayed on a Siemens HICOR angiocardiography system, see section 2.1 data acquisition, page 619), characterized in that a transformation operation is performed on every pair of successive images from the series of images of the organ in such a manner that subsequent to the transformation operation the organ will be displayed essentially in a fixed position (a translational and rotational transformation is performed on each of the series of the images, which the preceding frame is taken as a reference frame for the subsequent frame, and all frames are aligned in a fixed position as seen in figure 3, see section 2.2 data analysis).

- b. Referring to Claim 2, Cesmeli discloses the method characterized in that the first image in time serves as a reference base and that each of the subsequent images is transformed so as to minimize difference between each of said images and the reference base (see section 2.2 on page 620, right column and section 3 on page 621).
- c. Referring to Claim 3, Cesmeli discloses the method characterized in that the first image in time of every pair of successive images serves as a reference base, and that the subsequent second image is transformed so as to minimize difference between said second image and the reference base (see explanation in Claim 2, and each pair of successive images in Cesmeli are the preceding image and the subsequent image).
- d. Referring to Claim 4/1, Cesmeli discloses the method characterized in that the transformation operation is composed of a rotation operation and a translation operation that are performed on the image (page 620, see 2.2 data analysis section).
- e. With regard to Claim 4/2, see explanation in Claim 4/1.
- f. With regard to Claim 4/3, see explanation in Claim 4/1.
- g. With regard to Claim 8, see explanation in Claim 1.
- h. With regard to Claim 9, all the limitations are explained in Claim 1 except “a computer program”, which is inherently included in the “Siemens HICOR angiocardiology system.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

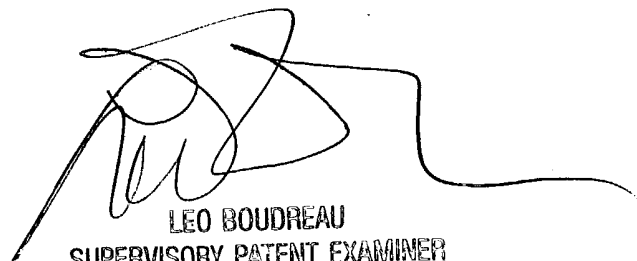
- a. Goris et al, U.S. 5,970,182, see column 8, lines 10-36.
- b. Olstad et al, U.S. 6,447,450 B1, see columns 3-5.
- c. Maas, III et al, U.S. 5,850,486, see figure 3.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y Lu whose telephone number is (703) 306-4057. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu



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